United States Patent [19]

Smith

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[54] **INFRARED LASER PHOTOCAUTERY DEVICE**

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[58] **Field of Search** 128/303.1, 395, 276

[56] **References Cited**

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[57] **ABSTRACT**

An apparatus and method for cauterizing biological tissue while providing isolation from surrounding absorbing tissue and fluid media. The device is comprised of a probe having a special window through which an infrared laser beam is directed to cauterize the biological tissue. The device is comprised of an infrared laser beam generator, a control circuit for controlling the intensity and duration of the laser beam and an articulated arm for directing the laser beam to the probe. The probe is comprised of a hollow, laser light guide tube having an infrared transparent window in its tip which permits the tip to be brought into contact with biological tissue such as vascular tissue to be cauterized while excluding the surrounding absorbing tissue from the effects of the beam. The probe may also include an adjacent endoscopic viewing tube and accessory tube to provide fluid, suction and optical illumination at the vicinity of the window.

21 Claims, 11 Drawing Figures